

**Flood Control Project Maintenance
Levee Inspections**

Fall 2012 Levee Maintenance Deficiency Summary Report

Overall LMA & Unit Ratings, including USACE Erosion Survey

Sacramento River Basin

RD2098	Overall LMA Rating	Total LMA Miles						
Reclamation District No. 2098 Cache and Haas Slough	A	10.96						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Earthen Levee</i>								
Vegetation	0.01		0.01	0.09%				
Erosion / Bank Caving	0.04		0.04	0.37%				
<i>Channels</i>								
Shoaling / Sedimentation	0.23		0.23	2.10%				
<i>Supplemental</i>								
USACE Erosion Survey	0.02		0.02	0.18%				
<i>LMA Totals:</i>	0.30	0.00	0.30	2.74%	0.00	0.00	0.00	0.00
Unit No. 01 Yolo Bypass RB	Overall Unit Rating	Total Unit Miles						
RD2098	A	3.58						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Earthen Levee</i>								
Vegetation	0.01		0.01	0.28%				
Erosion / Bank Caving	0.04		0.04	1.12%				
<i>Unit Totals:</i>	0.05	0.00	0.05	1.40%	0.00	0.00	0.00	0.00
Unit No. 01A Cross Levee RB	Overall Unit Rating	Total Unit Miles						
RD2098	A	0.55						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
No Items								
<i>Unit Totals:</i>	0.00	0.00	0.00	0.00%				
Unit No. 02 Cache Slough LB	Overall Unit Rating	Total Unit Miles						
RD2098	A	2.01						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
No Items								
<i>Unit Totals:</i>	0.00	0.00	0.00	0.00%				
Unit No. 03 Haas Slough RB	Overall Unit Rating	Total Unit Miles						
RD2098	A	1.89						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Supplemental</i>								
USACE Erosion Survey	0.01		0.01	0.53%				
<i>Unit Totals:</i>	0.01	0.00	0.01	0.53%	0.00	0.00	0.00	0.00

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Fall 2012 Levee Maintenance Deficiency Summary Report

Overall LMA & Unit Ratings, including USACE Erosion Survey

Sacramento River Basin (cont.)

Unit No. 04 Back Levee LB	Overall Unit Rating	Total Unit Miles						
	A	2.93						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
Channels								
Shoaling / Sedimentation	0.23		0.23	7.85%				
Supplemental								
USACE Erosion Survey	0.01		0.01	0.34%				
Unit Totals:	0.24	0.00	0.24	8.19%	0.00	0.00	0.00	0.00

**Flood Control Project Maintenance
Levee Inspections**
LMA District Cover Sheet
Fall 2012 Levee Inspection Results

Reclamation District No. 2098 Cache and Haas Slough

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)
* Overall LMA Rating (Fall Only)			A	

** Non-receipt of Summer or Winter Inspection Reports may effect overall annual rating.

*
SPRING INSPECTIONS: Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.

FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports.

Comments

**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2012 Levee Inspection Results

Reclamation District No. 2098 Cache and Haas Slough

Waterway			Bank	Unit Miles
Unit No. 01 Yolo Bypass			Right	3.58
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	05/09/2012 - 05/09/2012		10/17/2012 - 10/17/2012	
DWR Inspector	Herman Phillips		Herman Phillips	
Accompanied By	Mike Hardesty RD 2098		Mike Hardesty RD 2098	

Summer & Winter Inspections

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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 2098 Cache and Haas Slough

Waterway						Bank	Unit Miles	Inspection Start/End	Inspector	
Unit No. 01 Yolo Bypass						Right	3.58	10/17/2012 10/17/2012	Herman Phillips	
LMR No.	Levee Mile		Category	Item	Location * + Rating	Action/Comment	GPS Latitude/Longitude		Issue No.	Photo
	Start	End					Start	End		
1			Earthen Levee	Operations & Maintenance Manuals	WS A Ma		°	°	13	
DWR ID: DWR_RD2098_01_s_2012_13										
2			Earthen Levee	Emergency Supplies & Equipment	WS A Ma		°	°	14	
DWR ID: DWR_RD2098_01_s_2012_14										
3			Earthen Levee	Flood Preparedness & Training	WS A Ma		°	°	15	
DWR ID: DWR_RD2098_01_s_2012_15										
4	0.00	0.00	Earthen Levee	Vegetation	LS M Ma	V2 : Remove the wild growth other than native grasses from the levee slopes.	38.329118 ° -121.694060 °	38.329118 ° -121.694060 °	7 Y	
DWR ID: DWR_RD2098_01_s_2012_7										
5	0.44	0.54	Earthen Levee	Erosion / Bank Caving	WS C Ma	E1 : Note and monitor erosion site.	38.322738 ° -121.694010 °	38.321288 ° -121.694004 °	3	
DWR ID: DWR_RD2098_01_s_2012_3										
6	0.57	0.59	Earthen Levee	Erosion / Bank Caving	WS M Ma	E1 : Note and monitor erosion site.	38.320853 ° -121.694002 °	38.320564 ° -121.694002 °	16	
DWR ID: DWR_RD2098_01_s_2012_16										
7	0.61	0.63	Earthen Levee	Erosion / Bank Caving	WS M Ma	E1 : Note and monitor erosion site.	38.320979 ° -121.694029 °	38.319984 ° -121.694001 °	17	
DWR ID: DWR_RD2098_01_s_2012_17										
8	0.64	0.66	Earthen Levee	Erosion / Bank Caving	WS C Ma	E2 : Schedule repair of erosion site prior to the next inspection.	38.319839 ° -121.694008 °	38.319549 ° -121.694000 °	18	
DWR ID: DWR_RD2098_01_s_2012_18										
9	2.27	2.37	Earthen Levee	Vegetation	WS C Ma	V2 : Remove the wild growth other than native grasses from the levee slopes.	38.296054 ° -121.693635 °	38.294612 ° -121.693660 °	11	
DWR ID: DWR_RD2098_01_s_2012_11										

*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable
N : Not Inspected/Rated
C : Corrected
A/W : Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiency
Ob : Design & System Obsolescence
En : Enforcement

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 2098 Cache and Haas Slough

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Yolo Bypass	Right	3.58	10/17/2012 10/17/2012	Herman Phillips

Levee Mile Report Line	4
Start Levee Mile	0.00
End Levee Mile	0.00
Location	Land Side
Category	Earthen Levee
Item	Vegetation

RD 2098 Unit 1. Looking downstream levee mile 0.00. Photo taken 10-17-2012.

phillips_f_20121206_478.jpg



* Location LS : Land Side WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2012 Levee Inspection Results

Reclamation District No. 2098 Cache and Haas Slough

Waterway			Bank	Unit Miles
Unit No. 01A Cross Levee			Right	0.55
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	05/09/2012 - 05/09/2012		10/17/2012 - 10/17/2012	
DWR Inspector	Herman Phillips		Herman Phillips	
Accompanied By	Mike Hardesty RD 2098		Mike Hardesty RD 2098	

Summer & Winter Inspections

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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 2098 Cache and Haas Slough

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01A Cross Levee	Right	0.55	10/17/2012 10/17/2012	Herman Phillips

Levee Mile Report Line	1
Start Levee Mile	0.00
End Levee Mile	0.00
Location	Land Side
Category	Earthen Levee
Item	Vegetation
RD 2098 Unit 1A looking downstream. Photo taken 10-17-2012.	
phillips_f_20121206_479.jpg	



* Location LS : Land Side WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2012 Levee Inspection Results

Reclamation District No. 2098 Cache and Haas Slough

Waterway			Bank	Unit Miles
Unit No. 02 Cache Slough			Left	2.01
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	05/09/2012 - 05/09/2012		10/17/2012 - 10/17/2012	
DWR Inspector	Herman Phillips		Herman Phillips	
Accompanied By				

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Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 2098 Cache and Haas Slough

Waterway						Bank	Unit Miles	Inspection Start/End	Inspector	
Unit No. 02 Cache Slough						Left	2.01	10/17/2012 10/17/2012	Herman Phillips	

LMR No.	Levee Mile		Category	Item	Location *	Rating **	Action/Comment	GPS Latitude/Longitude		Issue No. Photo
	Start	End						Start	End	
1	5.29	5.29	Earthen Levee	Vegetation	WS	A Ma	V1 : Control annual grass and weeds on the levee slopes and easements.	38.275706 ° -121.705698 °	38.275706 ° 121.705698 °	2 Y
DWR ID: DWR_RD2098_02_f_2012_2										
2	5.29	5.56	Earthen Levee	Crown Surface / Depressions / Rutting	CR	C Ma	C1 : Add appropriate material and re-grade the levee to bring the crown above the design elevation.	38.275696 ° -121.705737 °	38.278822 ° -121.708672 °	3
DWR ID: DWR_RD2098_02_s_2012_3										
3	6.19	7.24	Earthen Levee	Crown Surface / Depressions / Rutting	CR	C Ma	C1 : Add appropriate material and re-grade the levee to bring the crown above the design elevation.	38.284952 ° -121.715355 °	38.293299 ° -121.724526 °	4
DWR ID: DWR_RD2098_02_s_2012_4										

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Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 2098 Cache and Haas Slough

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Cache Slough	Left	2.01	10/17/2012 10/17/2012	Herman Phillips

Levee Mile Report Line	1
Start Levee Mile	5.29
End Levee Mile	5.29
Location	Water Side
Category	Earthen Levee
Item	Vegetation
RD 2098 Unit 2 looking downstream. Photo taken 10-17-2012.	
phillips_f_20121206_482.jpg	



* Location LS : Land Side WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2012 Levee Inspection Results

Reclamation District No. 2098 Cache and Haas Slough

Waterway			Bank	Unit Miles
Unit No. 03 Haas Slough			Right	1.89
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	05/09/2012 - 05/09/2012		10/17/2012 - 10/10/2012	
DWR Inspector	Herman Phillips		Herman Phillips	
Accompanied By				

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Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 2098 Cache and Haas Slough

Waterway				Bank	Unit Miles	Inspection Start/End	Inspector	
Unit No. 03 Haas Slough				Right	1.89	10/17/2012 10/10/2012	Herman Phillips	

LMR No.	Levee Mile		Category	Item	Location	Rating	Action/Comment	GPS Latitude/Longitude		Issue No. Photo
	Start	End						Start	End	
1	7.27	7.27	Earthen Levee	Vegetation	LS	A Ma	V1 : Control annual grass and weeds on the levee slopes and easements.	38.294171 ° -121.725037 °	38.294171 ° -121.725037 °	6
								DWR ID: DWR_RD2098_03_f_2012_6		
2	7.33	7.33	Supplemental	USACE Erosion Survey	WS	M Ma	Inspector Comments: 2011 - Large vertical erosion pockets and bank slumping. 2012: Site is part of the extended inventory, last inspected 2011. [2012 Site ID: HAS_7-9_L]	38.299606 ° -121.728621 °	38.294858 ° -121.725433 °	7
								DWR ID:		
3	7.37	7.41	Earthen Levee	Erosion / Bank Caving	WS	C Ma	E1 : Note and monitor erosion site.	38.295115 ° -121.725339 °	38.295525 ° -121.725852 °	2
								DWR ID: DWR_RD2098_03_s_2012_2		
4	7.45	7.58	Earthen Levee	Erosion / Bank Caving	WS	C Ma	E1 : Note and monitor erosion site.	38.295928 ° -121.726385 °	38.297285 ° -121.728060 °	5
								DWR ID: DWR_RD2098_03_s_2012_5		
5	8.01	8.01	Earthen Levee	Encroachments	LS	C En	TR : Tree or limb	38.303316 ° -121.727864 °	38.303316 ° -121.727864 °	9
								DWR ID: DWR_RD2098_03_s_2012_9		
6	8.39	8.81	Earthen Levee	Crown Surface / Depressions / Rutting	CR	C Ma	C1 : Add appropriate material and re-grade the levee to bring the crown above the design elevation.	38.306899 ° -121.731977 °	38.312023 ° -121.735579 °	12
								DWR ID: DWR_RD2098_03_s_2012_12		

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Levee Inspections**

Unit Cover Sheet

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Reclamation District No. 2098 Cache and Haas Slough

Waterway			Bank	Unit Miles
Unit No. 04 Back Levee			Left	2.93
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	05/09/2012 - 05/09/2012		10/17/2012 - 10/17/2012	
DWR Inspector	Herman Phillips		Herman Phillips	
Accompanied By				

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Unit No. 04 Back Levee							Left	2.93	10/17/2012 10/17/2012	Herman Phillips
LMR No.	Levee Mile		Category	Item	Location	Rating	Action/Comment	GPS Latitude/Longitude		Issue No. Photo
	Start	End						Start	End	
1	9.19	9.19	Earthen Levee	Vegetation	LS	A Ma	V1 : Control annual grass and weeds on the levee slopes and easements.	38.316669 ° -121.740071 °	38.316669 ° -121.740071 °	1
								DWR ID: DWR_RD2098_04_f_2012_1		
2	9.19	10.03	Earthen Levee	Crown Surface / Depressions / Rutting	CR	C Ma	C1 : Add appropriate material and re-grade the levee to bring the crown above the design elevation.	38.313580 ° -121.737744 °	38.327864 ° -121.740650 °	7
								DWR ID: DWR_RD2098_04_s_2012_7		
3	9.44	9.44	Supplemental	USACE Erosion Survey	WS	M Ma	Inspector Comments: 2011 - Several scallops of erosion. Erosion primarily due to the weight of cattle on the slope. 2012: Site is part of the extended inventory, last inspected 2011. [2012 Site ID: HAS_9-7_L]	38.324587 ° -121.740254 °	38.320240 ° -121.740183 °	4
								DWR ID:		
4	9.80	9.84	Earthen Levee	Vegetation	WS	C Ma	V2 : Remove the wild growth other than native grasses from the levee slopes.	38.324938 ° -121.740123 °	38.324968 ° -121.740132 °	2
								DWR ID: DWR_RD2098_04_s_2012_2		
5	9.82	12.08	Earthen Levee	Vegetation	WS	C Ma	V2 : Remove the wild growth other than native grasses from the levee slopes.	38.325232 ° -121.740142 °	38.358206 ° -121.740377 °	3
								DWR ID: DWR_RD2098_04_s_2012_3		
6	9.82	10.05	Channels	Shoaling / Sedimentation	WS	M Ma		38.325233 ° -121.740141 °	38.326011 ° -121.740654 °	12
								DWR ID: DWR_RD2098_04_s_2012_12		
7	10.03	11.18	Earthen Levee	Vegetation	WS	C Ma	V2 : Remove the wild growth other than native grasses from the levee slopes.	38.327864 ° -121.740646 °	38.344653 ° -121.740818 °	5
								DWR ID: DWR_RD2098_04_s_2012_5		
8	10.93	10.94	Earthen Levee	Trim / Thin Trees	WS	C Ma	T1 : Trim trees to at least five feet above ground level.	38.340930 ° -121.740783 °	38.341077 ° -121.740735 °	10
								DWR ID: DWR_RD2098_04_s_2012_10		

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